

The National FAA Safety Team Presents

Topic of the Month – November CFIT & Overreliance on Automation

Presented to:

EAA Apalachicola Chapter 1646

By:

Bruce A. Graham, FFAST Rep.

Date:

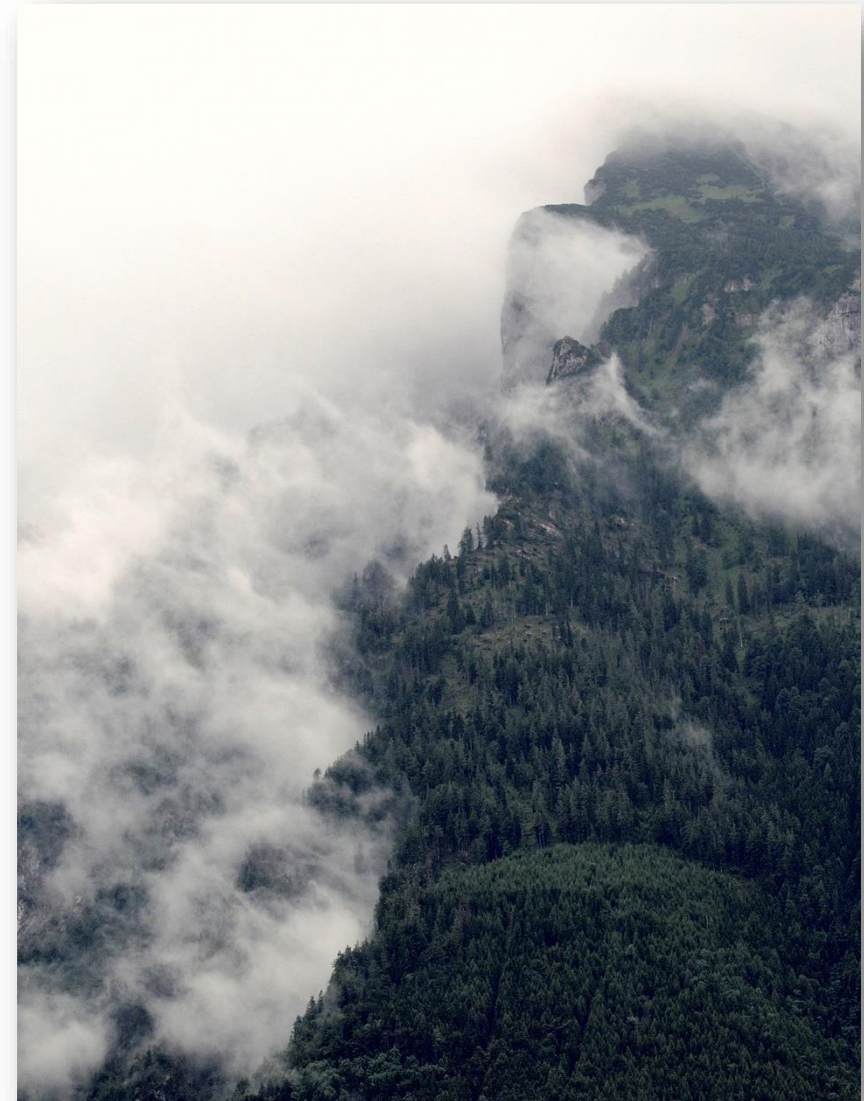
13 November 2021

Produced by AFS-850

The National FAA Safety Team (FAASTeam)



**Federal Aviation
Administration**



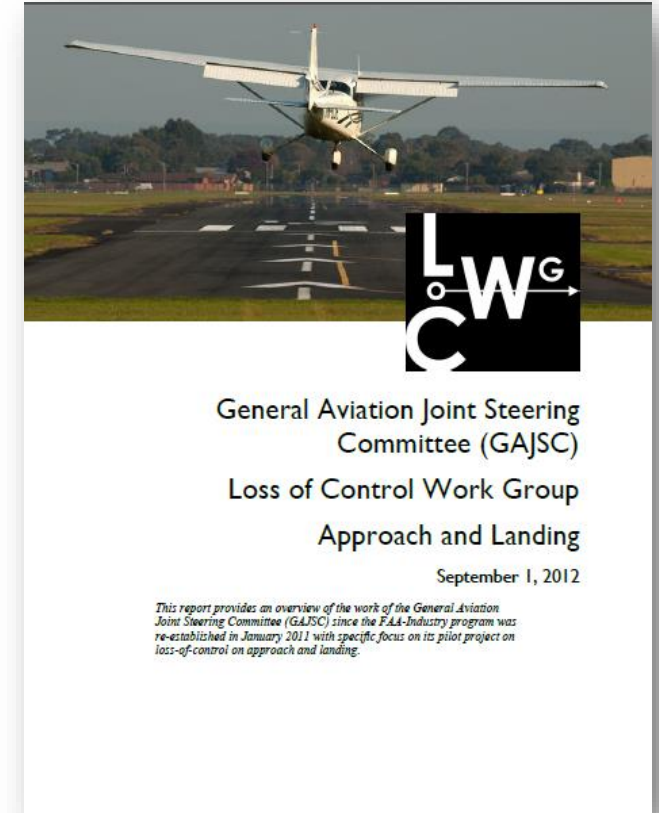
Welcome

- Exits
- Restrooms
- Emergency Evacuation
- Breaks
- Thanks to the Chapter
- Set phones, pagers and other “automation” to silent or off



Overview

- The CFIT Accident
- SRM solutions and *GAJSC safety enhancements
- Technology Solutions
- Recommendations



*GAJSC – General Aviation Joint Steering Committee



Controlled Flight Into Terrain

- **A big problem in the 1970s**
 - More instrument flying
 - In more aircraft by more pilots.
- **Terrain doesn't have to be high elevation**

15 MSL (1972)



1,670 MSL (1974)



TWA 514 – 1 December 1974 – Day IMC

- **Scheduled to KDCA (Washington National)**
- **Diverted to KIAD (Washington Dulles)**
 - Radar vectors to RY 12 VOR/DME
- **“Position five miles from JETMO. Fly heading one four zero. Maintain three thousand until established on the localizer. Cleared ILS one two approach.**



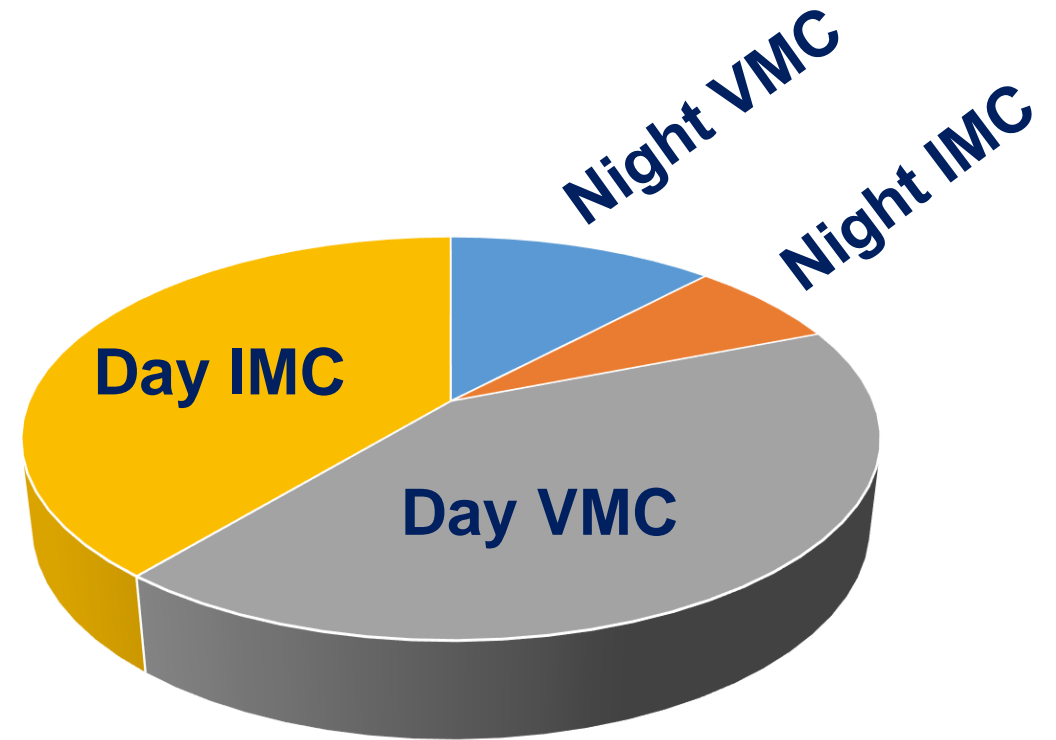
Eastern 401 – 29 December 1972 – Night VMC

- **Night VMC Approaching KMIA (Miami)**
- **Fixation on solving a problem**
 - Landing gear light inoperative
- **Failure to monitor autopilot descent**
- **Be expert at dealing with distractions**
- **Fly the aircraft first!**



The CFIT Accident

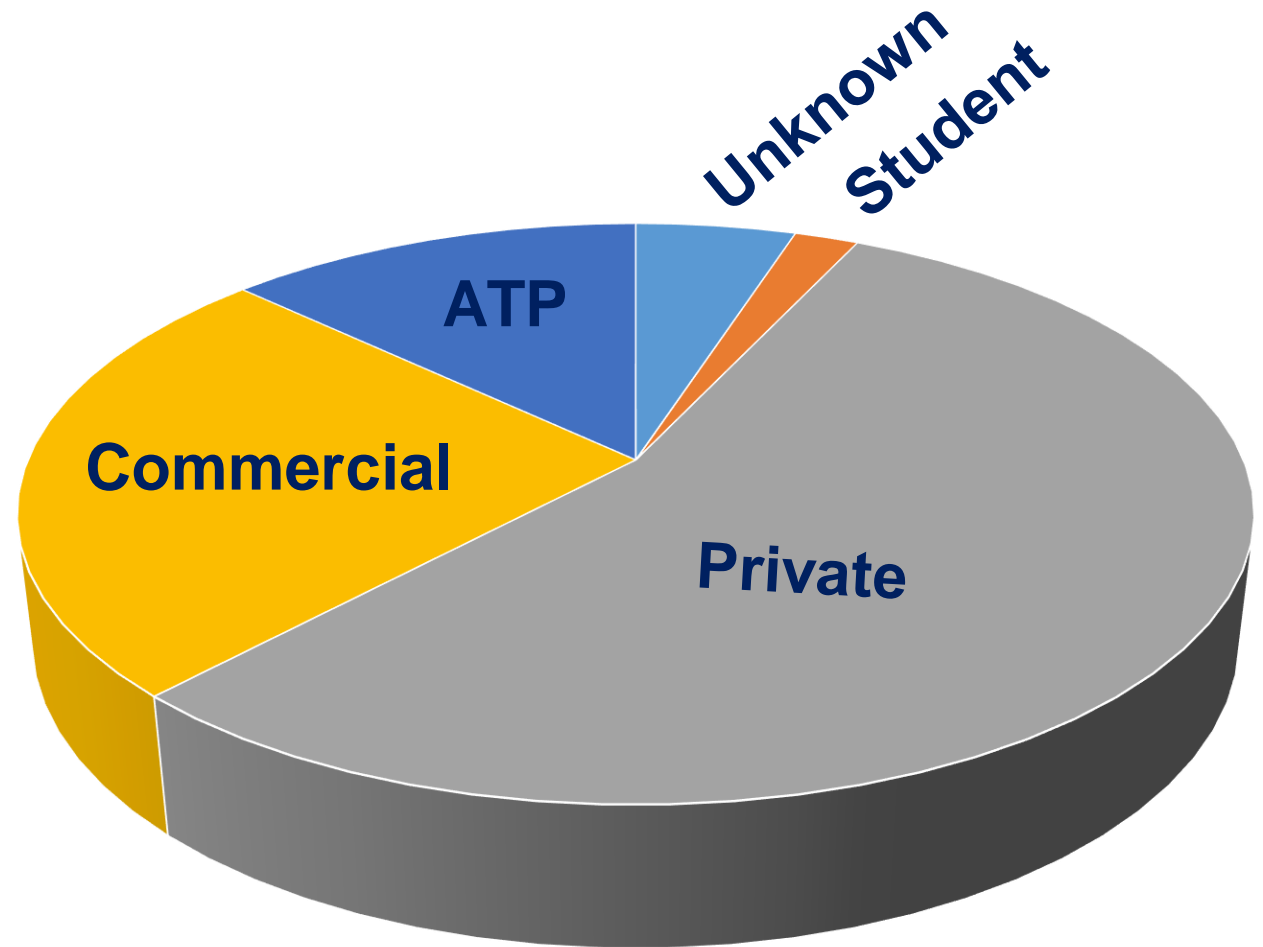
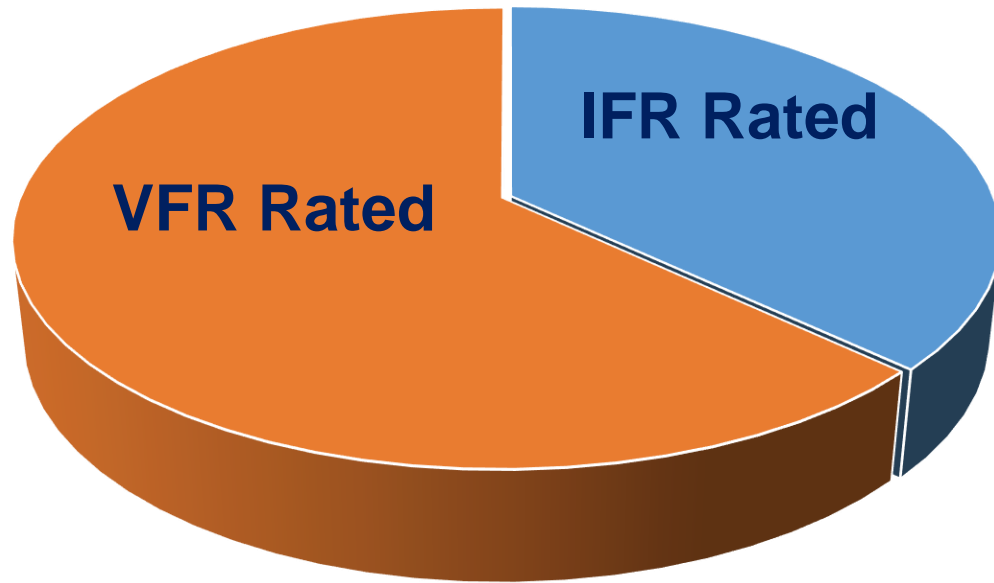
- **Unintentional Collision with Terrain while an Aircraft is Under Positive Control**
- **In one year**
 - 41 CFIT Accidents
 - 56% Fatal
 - Inexperienced Pilots?
 - Dark Night and/or IMC?



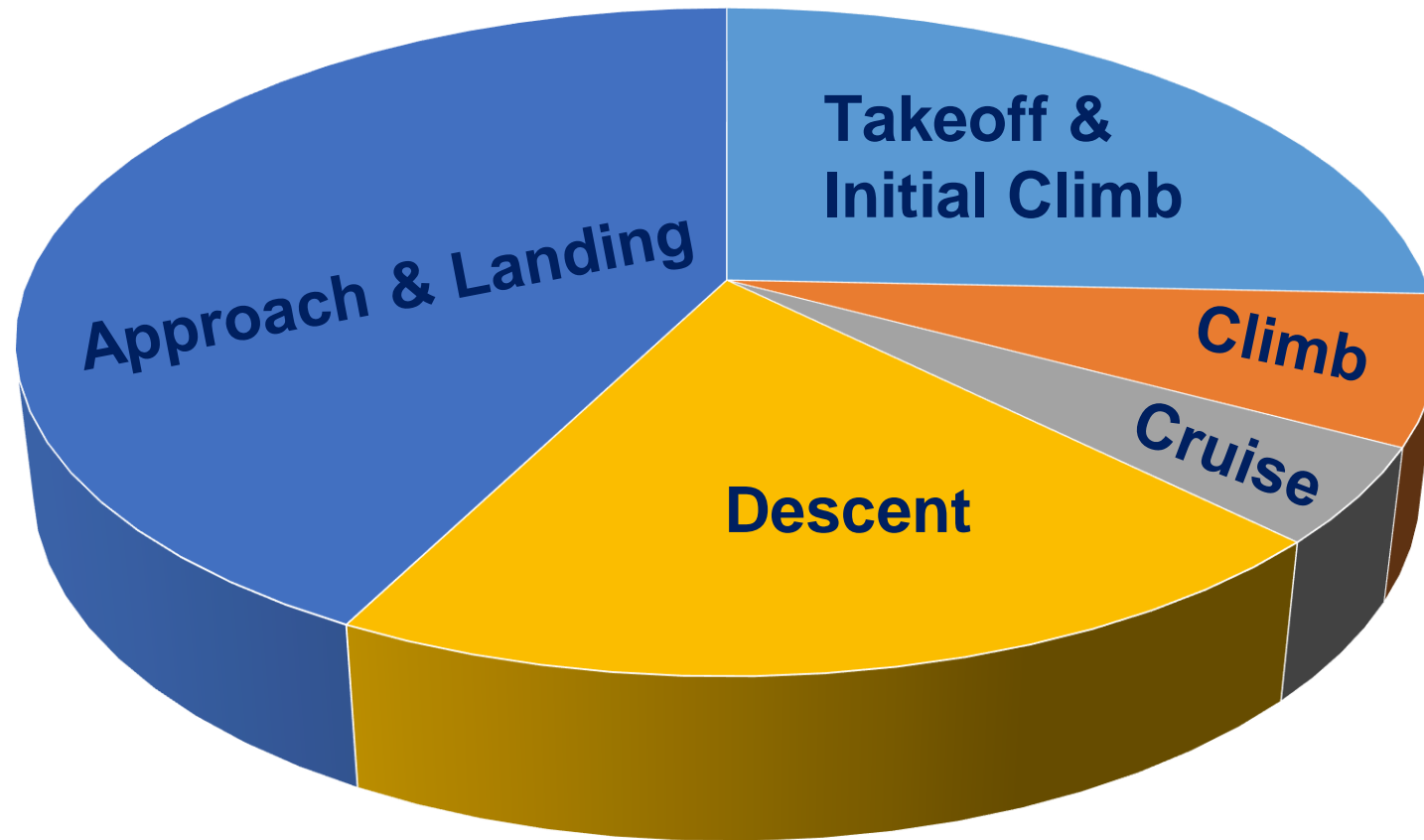
Flight Environment



CFIT and Pilot Certificates & Ratings



CFIT and Phase of Flight



The CFIT Accident

- **Continued VFR into IMC**
 - Accidents are almost always fatal
 - 11 Accidents in study group
 - 25% of total
 - 6 Pilots were instrument rated
 - 5 were not instrument rated



The CFIT Accident

- **IFR Procedural Mistakes**

- Flight below minimum en route or crossing altitudes
- Descent below MDA
- Failure to fly assigned heading or altitude

- **Wire Strikes**

- Common in – but not exclusive to - Ag Operations
- **Most are below 200 Ft. AGL!**
- Many wires are unmarked



The CFIT Accident

- **Unrealistic aircraft performance expectations**
 - Density Altitude
 - Short and/or obstructed runways
 - Weight and balance
 - Carb ice
 - Tailwinds



Automation is a wonderful thing

- Flies with precision and accuracy
- Reduces pilot workload



VS.



Automation is a wonderful thing but

- There are limitations



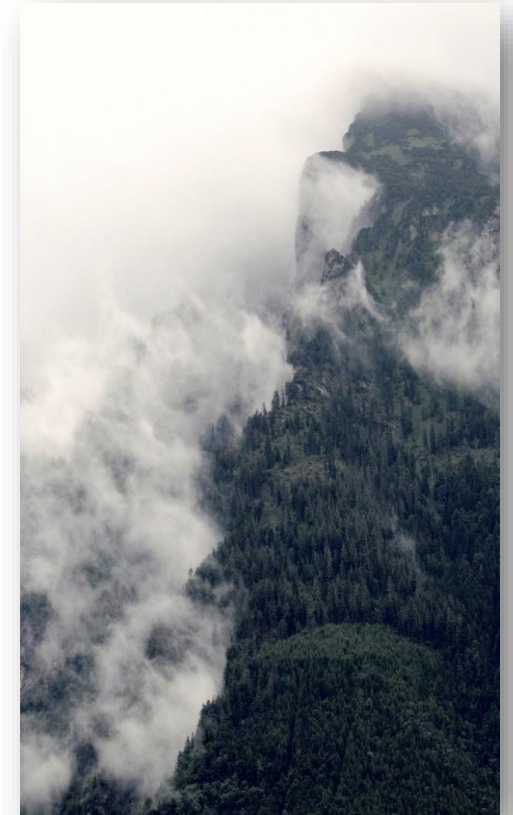
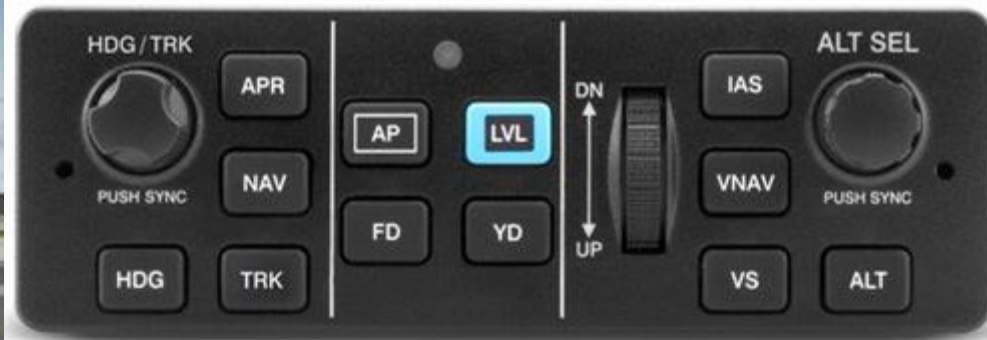
Automation is a wonderful thing but

- There are limitations



Automation is a wonderful thing but

- Stay ahead of the airplane!

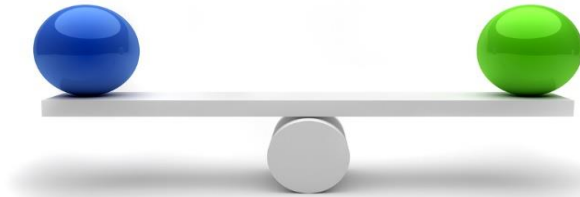


“Never let the airplane take you somewhere that your brain didn’t get to five minutes earlier.”



Automation is a wonderful thing but

- Breeds complacency
- Erodes pilot confidence



Recommendations:

- **Thoroughly understand the automation in your aircraft**
 - Including data sources and their failure modes
 - Normal operations
 - Failure modes and emergency operations
 - Know all the ways to disconnect
- **Practice hand flying regularly**
- **Participate in regular proficiency training**
- **Fly as often as you can**



Questions?

- **Bruce Graham, FAASTeam Representative**
 - Apalachicola Regional Airport (KAAF)
 & Carrabelle-Thompson Airport (X13)
 - b.a.graham@comcast.net
 - Cell: (703) 678-6042
- **Andrew Crossman, FAASTeam Program Manager**
 - Aviation Safety Inspector
 - Tampa Flight Standards District Office
 - Andrew.W.Crossman@faa.gov
 - Office #: 813-287-4933



Have you earned your *WINGS*?

- **Proficient Pilots are:**
 - Confident
 - Capable
 - Safe
- ***WINGS*** will keep you on top of your game



The Paul & Fran Burger 2019 *WINGS* \$10,000 Sweepstakes

A screenshot of the WINGS Sweepstakes Pilot Entry Form. The form is titled "WINGS Sweepstakes Pilot Entry Form" and is set against a background of repeating WINGS logos. The form fields include: "Pilot Name", "Primary Email address", "Email Registered on faasafety.gov", "WINGS Phase Completed" (a dropdown menu), and "Date Completed". A "Submit" button is located at the bottom of the form. Below the form, a note states: "Please refer to the Rules for entry before submitting. (Deadline for entry December 31, 2018)".

Complete WINGS Phases and WIN Cash Awards!

www.mywingsinitiative.org



Federal Aviation
Administration

How To Win – It's Easy

- Whenever you complete a *WINGS* phase, select *WINGS* Sweepstakes on the Team Member Award section of your My *WINGS* page
- Or Visit www.mywingsinitiative.org & click on “Sweepstakes Entry”
- Complete the form, get chances to win one of 10 cash prizes!

Four \$1,500, Four \$750, Two \$500 Winners



Thank you for attending

- You are vital members of our GA safety community



The National FAA Safety Team Presents

Topic of the Month – November CFIT & Overreliance on Automation

Presented to: <Audience>
By: <Presenter>
Date: < >

Produced by AFS-850
The National FAA Safety Team (FAASTeam)



**Federal Aviation
Administration**

